DOCUMENT RESUME

ED 280 402 HE 020 253

AUTHOR Smith, Edwin R.; Bissonnette, Kathleen K.
TITLE A Comparative Analysis of the Economic Benefits of Nonresident Students. AIR 1986 Annual Forum Paper.
PUB DATE Jun 86
NOTE 24p.; Paper presented at the Annual Forum of the Association for Institutional Research (26th, Orlando, FL, June 22-25, 1986).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *College Students; Comparative Analysis; *Economic Factors; *Expenditures; Higher Education; *Out of State Students; Purchasing; School Business Relationship; *School Community Relationship; Tuition
IDENTIFIERS *AIR Forum; Economic Impact; *West Virginia

ABSTRACT

The economic contribution of nonresident college students to West Virginia's economy was examined. Comparisons were also made to the economic costs and benefits to the state of visitors to the state's parks system. The economic benefits of nonresident students on the West Virginia economy was estimated by summing the approximated effects of three major categories of direct impact: tuition and fees, visitor expenditures, and student living expenses. A multiplier was used to estimate an indirect economic impact. The same methodology was used to estimate out-of-state visitor spending with the parks systems, as well as out-of-park spending. After estimating economic costs for nonresident students and park visitors, a benefit-to-cost ratio was calculated, as well as a per student state educational subsidy (the differences between the state investment per full-time equivalent student and student charges (tuition and fees). In 1983-1984, the overall economic return to the state on its investment in nonresident student education approached three dollars for each state tax dollar invested. There was a higher benefit-to-cost ratio associated with out-of-state state parks visitors compared with that associated with nonresident students. (SW)

A COMPARATIVE ANALYSIS OF THE ECONOMIC BENEFITS OF NONRESIDENT STUDENTS

Edwin R. Smith, Ed.D.
Kathleen K. Bissonnette, Ph.D.

A paper presented at the 26th Annual Forum
The Association for Institutional Research
Orlando, Florida
June 22-25, 1986

Office of Institutional Analysis and Planning
West Virginia University
Morgantown, West Virginia

This paper was presented at the Twenty-Sixth Annual Forum of the Association for Institutional Research held at the Marriott Orlando World Center, Orlando, Florida, June 22-25, 1986. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Ann K. Dickey, Chair
Forum Publications Editorial
Advisory Committee

A COMPARATIVE ANALYSIS OF THE ECONOMIC BENEFITS OF NONRESIDENT STUDENTS

ABSTRACT

Recent research efforts have been conducted to test the validity of the analogy of nonresident students as tourists and to assess the net economic impact of these students on the State economy (Smith and Bissonnette, 1985). Results of these efforts indicate that nonresident students contribute significantly to the State's economy. In 1983-84, the overall economic return to the Host State on its investment in nonresident student education approached three dollars for each State tax dollar invested. In the study year, the purpose of this current research is to compare this investment return to that of another relevant State agency, specifically, state parks, and to assess and discuss the potential economic impacts of increased investments in the nonresident student industry.

A COMPARATIVE ANALYSIS OF THE ECONOMIC BENEFITS OF NONRESIDENT STUDENTS

Statement of the Problem

In recent years, the cost of quality higher education has increased dramatically both to the institution and to the students. Passing on the operational increases, at least in part, to the students in the form of increased tuition and fees has been a relatively common and accepted practice. However, this solution, as with many financial alternatives, soon reaches a point of diminishing returns. Student costs rise beyond that which the market will bear and enrollments begin to decline. At a time of decline in the traditional college age population, the added disincentive of increasing costs, possibly resulting in the removal of one's competitive edge in terms of students costs, can be devastating to the vitality of an institution. Therefore, it is advantageous for an institution to evaluate its resource costs and benefits from a system's perspective in order to identify alternative, innovative, perhaps even counterintuitive strategies for solving the problems of rising operational costs.

In the United States, most, if not all, publicly-supported institutions have traditionally differentiated between resident students of the state and nonresident students in terms of tuition and fees, nonresident charges being significantly higher than resident charges. In recent years, declining enrollments, however, have resulted in a more competitive student market, and the long-standing practice of higher nonresident charges has resulted at some institutions in significant declines in nonresident

[1]The authors wish to acknowledge the contribution of Professors Frederick A. Zeller and Wil J. Smith, Office of Applied Research, Evaluation & Planning, Professor Patricia E. Goeke, College of Business and Economics, and Susanna S. Shamim, Research Assistant, Office of Institutional Analysis, West Virginia University.

enrollments.

At West Virginia University[2], nonresident undergraduate tuition and fees increased 83.8% in three years (1981/82-1983/84). The apparent negative impacts of these increases on enrollment were small until 1983-84 when the student headcount for nonresident undergraduate students dropped a full 13%. While other factors may well have contributed to this sharp decline, the rising student costs can be assumed to be a determinant. Continuing declines in student enrollments, particularly nonresident students, will almost certainly affect the institution's capacity to construct buildings and enhance student services, both of which are funded primarily from student fees at WVU.

One interesting perspective relating to this issue is to consider nonresident students as temporary contributors to the State's economy, types of tourists, and assess the net economic impact of these students on West Virginia's economy. This analogy is somewhat unusual as tourists are generally seen as providing economic benefits to a state, whereas nonresident students have typically been considered an economic burden. Both groups, however, come to the state on a temporary basis, spend money which would not otherwise enter the economy and also attract other visitors, including other students. Recent research efforts have been conducted to test the validity of this analogy (Smith and Bissonnette, 1985). Results of these efforts indicate that nonresident students contribute significantly to the State's economy. The purpose of this current research is to compare this investment return to that of another relevant state agency and to assess and discuss the potential economic impacts of increased investment in the nonresident student industry.

---

[2] Prior to the 1982-83 academic year, tuition and fees for nonresident students at WVU were about equal to or less than resident tuition and fees at major Pennsylvania State institutions.

Literature Review

Although much of the controversy about policy toward nonresident students centers upon economic issues, there has been little empirical investigation of the economic impact of out-of-state students on the state and public institutions of higher education.

Several studies examine the issues concerning nonresident students. These, however, attempt to understand the causes and motivations of student migration (McHugh & Morgan, 1984; Long, 1976; Greenswood, 1973; Schwartz, 1973) or the legality of tuition differentials for nonresident students (Lines, 1983).

The public debate on tuition increases for nonresident students, however, is gaining importance given the existing popular support for limiting government spending, and the general prospect of tight budgets for higher education institutions. Proponents of nonresident tuition increases argue that nonresident tuition rates below the full cost of educating these students represent a subsidy to residents of other states, and that the first obligation of a state is to satisfy the educational needs of its own residents (McHugh and Morgan, 1984). Opponents of such increases often express concern about the effect of high nonresident tuition rates on students. They contend that such increases reduce the range of choices available to students and reduce the competitiveness of the market for education. They also point out that nonresident students contribute to the social and cultural base of the university and contribute to the state's economy by their spending (Morgan, 1983) and in some cases by remaining in the state as residents after graduation (Long, 1976).

Our review of the research revealed four studies which support the opponents of nonresident tuition increases and are also closely related to the perspective of this paper. Ontjes and Browning (1973) conducted a

study to determine the total monetary contributions to Northwest Missouri State University, the State of Missouri and to Missourians attributable to the presence of nonresident students attending Northwest Missouri State University. The study also determined the impact of these expenditures on Missouri's economy with the use of an appropriate multiplier and determined the increased cost to the State of educating nonresident students at Northwest Missouri State University. A survey using a random sample of nonresident students in attendance at NWMSU determined their spending patterns. The study came to a definitive conclusion that nonresident students were an economic asset to the University, the local community, and the State.

A similar study was conducted by Ashton and Huff (1973) concerning the economic impact of spending by students in Arizona universities. Their findings support those of Ontjes and Browning in Missouri, that is, that nonresident students are an economic boost to the State and the University.

Likewise, the Vermont State Commission on Higher Education (1979) provides insight into the economic and social impact of the 22 colleges and universities in Vermont. The Commission measured the short-term cash flows and expenditures by students and institutional revenues by in-state/out-of-state students.

In an analysis of the independent sector of higher education in the State of New York, Gay and Weintraub (1978) reveal the importance of this sector in the State's recovery effort. The operating revenues of independent higher education in 1976 amounted to over $2 billion, of which 30 percent was from out-of-state sources. Out-of-state students spent an estimated $8 billion in 1977-78. The authors conclude that the importation of monies by out-of-state students is a significant factor in the growth of the independent sector which in turn is an important element in the State's

economy.

More recently, Smith and Bissonnete (1985) corroborated the findings of the earlier studies that nonresident students are an economic benefit to the host state. The results of their study of nonresident students at West Virginia University indicate that the return on investment in terms of economic activity approaches three dollars for every one dollar of state tax dollar invested on out-of-state students.

Methods

The economic costs and benefits to the State of visitors to the State's Parks System was estimated and compared with similar costs and benefits for nonresident students. Both direct and indirect impacts were calculated based on standard methodologies described in the literature (Caffrey and Issacs, 1971; Yi, 1984). The net economic impact on the State and local economics, in terms of economic activity, were then calculated for both populations and the results compared. Finally, the respective agency-user State subsidy will be calculated for both agency groups, that is, the difference between the average investment of tax dollars/agency-user and the agency-user cost in terms of tuition, fees and assessments. This calculation was then used to determine for each agency group an estimate of total "cost-free" dollar infusion (profit) to the State.

PART I. ESTIMATION OF ECONOMIC BENEFITS

A. Nonresident Students

The economic benefits of nonresident students on the West Virginia economy was estimated by summing the approximated effects of three major categories of direct impact, tuition and fees, visitor expenditures, and student living expenses, and an appropriate multiplier to account for an indirect economic impact. First, an estimate of the direct economic contribution from nonresident student tuition and fees was calculated by

multiplying the annual nonresident graduate and undergraduate tuition and fee charges (1983-84) by the FTE student enrollment, graduate and undergraduate respectively. (Table 1).

TABLE 1

An estimate of total tuition and fees paid by wVU's nonresident students for the academic year 1983-84:

Student Level	FTE Enrollment	X	Tuition & Fee Charges	=	Contribution[3]
Undergraduate	6,418	x	$2,940	=	$18,868,920
Graduate	1,014	x	$3,140	=	3,183,960
TOTAL					$22,052,880

Based on these calculations, an estimated $22,052,880 was directed to West Virginia's economy from WVU's nonresident student tuition and fee charges during the study year.

Next, the direct economic contribution of nonresident student living expenditures was estimated by multiplying the total number of nonresident FTE students (graduate and undergraduate) by an estimate of annual WVU student living expenses (Table 2).

TABLE 2

An estimate of total annual student living expenses for WVU's nonresident students for the 1983-84 academic year:[4]

Annual Student Living Expenses	X	Total Nonresident FTE Enrollment	=	Annual Nonresident Student Living Expenditures
$4,260	X	7,431	=	$31,656,060

[3] For purposes of consistency and generalizability, this study excludes the WVU Medical Center Campus, in terms of budget and student FTE in all calculations.

[4] The estimates of student living expenses used in this study are based on those calculated for single students, living off-campus, with no dependent children.

This estimate of annual student living expenses ($4,260) is based on the results of a WVU economic impact study (Yi, 1984) and the Educational Expense Budgets used at WVU to determine student eligibility for financial aid for the academic year 1983-84. Based on this estimate of student living expenses, the total annual nonresident student living expenditures for 1983-84 at WVU was $31,656,060.

In addition, visitor contributions to the community and State economy were estimated using the method recommended by Caffrey and Issacs (1971). As shown in Table 3, visitor expenditures are calculated by multiplying the nonresident FTE enrollment times an estimated number of visitors per student annually (1.5 visitors) multiplied by an estimate of visitor-cost per day ($60) times an estimated number of visit-days per visitor (3 days).

TABLE 3

An estimate of WVU's nonresident student visitors' expenditures for the academic year 1983-84:

Total Nonresident FTE Enrollment	X	# Visitors/ Student	X	Daily Visitor Expenses	X	#Visit Days/ Visitor
7,431		1.5		$60		3

= Nonresident Student Visitor Expenditures

$2,006,370

Therefore, based on these calculations and methods, approximately $2 million ($2,006,370) was infused into the West Virginia economy by friends and relatives who visited nonresident students at WVU in 1983-84.

An estimate of the total direct economic contribution by WVU's nonresident students to the local and state economies was then calculated by summing the estimated contributions from tuition and fee charges, student living and visitor expenditures (Table 4).

TABLE 4

An estimate of total direct economic benefit of WVU's nonresident students to the West Virginia economy (1983-84):

Contribution Source	Estimated Benefit
Tuition & fee charges	$22,052,880
Student living expenses	31,656,060
Visitor expenditures	2,006,370
TOTAL	$55,715,310

An estimated $55,715,310 direct economic benefit was thus calculated to be associated with WVU's nonresident enrollment during the study year.

Finally, in terms of economic benefits, an estimate of the indirect economic impact of nonresident students was calculated using an appropriate multiplier. The available research suggests a multiplier of 1.2 as appropriate for a study of this nature (Table 5).

TABLE 5

An estimate of the total economic benefit (direct and indirect) associated with WVU's 1983-84 nonresident enrollment:

Total Direct Economic Benefit	X	Multiplier	=	Total Economic Benefit
$55,715,310		1.2		$66,858,372

As explained by Yi (1984), the indirect impact is measured by multipliers which are the result of secondary rounds of spending in the economy of the State. When new injections of spending occur in the economy, as with a nonresident student, the funds thus spent become additional income for other individuals who then respend a portion of it. They, in turn, generate additional income for yet other individuals and jobs for the State's economy. The impact of total spending by nonresident students on the State is, therefore, a multiple of the total dollars spent directly. The multiplier used in this study--1.2--means that every dollar expended on goods and services by nonresident students and their visitors generates $1.20 in the State's economy. Therefore, based on these methods and calculations, an estimated total economic benefit of $66,858,372 was associated with WVU's 1983-84 nonresident enrollment.

B. Out-of-State WV State Park Areas Visitors

This same methodology was then applied to data from the West Virginia State Parks, Forests and Wildlife areas (FY 83-84) in order to calculate an estimate of economic benefit. First, the total receipts from the State Parks, Forests and Wildlife areas (WV State Parks System) was obtained from the WV State Department of Natural Resources.[5] From this figure was subtracted the amounts for transfers in (i.e. taxes), Federal Reimbursements, and Concession payments to obtain an estimate of total "real visitor" spending with the Parks System (Table 6).

[5]Department of Natural Resources, Division of Parks and Recreation, Financial Review, FY 1983-84.

TABLE 6

An estimate of visitor spending within the West Virginia State Parks System areas for FY 1983-84:

Total Receipts	$9,445,405
Less: Transfers in	(107,690)
Federal Reimbursements	(1,040)
Concession Payments	(648,137)
Visitor Spending (Within WV State Parks System)	$8,688,538

In order to compare these data with those presented for nonresident students, the contribution of out-of-state visitors on total visitor spending was estimated (Table 7). This contribution was calculated by using a published out-of-state percentage (28.7%)[6], which is a weighted average based on resident and nonresident attendance figures for the WV State Parks System.

TABLE 7

Estimation of out-of-state visitor contribution to total visitor spending for FY 1983-84.

Total Visitor Spending (Within WV State Parks System)		$8,688,538
% Out-of-State Visitors	X	.287
Out-of-State Visitor Spending (WV State Parks System)		$2,493,610

Visitors to the WV State Parks System also contribute to the State economy by spending outside the park areas. This out-of-park spending for FY 1983-84 was estimated by using an appropriate multiplier. A direct estimate of this multiplier was made in the "Economic Impact of West Virginia's State Parks System, 1979-80," a study conducted by the Bureau of Business Research, West Virginia University for the WV Department of

[6]Department of Natural Resources, Division of Parks and Recreation, Financial Review, FY 1983-84.

Natural Resources. The multiplier for out-of-state visitors at that time was 1.91. In other words, for every $1.00 spent in the parks by visitors to the WV Parks areas, $1.91 was spent in the State outside of the WV Parks areas. A preliminary analysis of survey data on travel or spending in West Virginia (collected during 1984-85) suggests a slightly higher level of spending outside of the parks, or a multiplier of approximately 2.2. This may be an indication of relatively greater increases in prices paid for goods and services purchased outside the State Park areas (e.g. gasoline, retail groceries) or a slight shift in purchase patterns.

The higher multiplier provides a greater total impact attributable to out-of-state visitors and consequently a higher return on investment. A total picture of the economic benefits of Out-of-State WV State Parks System visitors on the WV economy in FY 1983-84 is presented in Table 8.

TABLE 8

The direct economic benefits of Out-of-State WV State Parks System Visitors to the WV economy in FY 1983-84.

Net Visitor Spending in WV Parks areas		$8,688,538
% Out-of-State Visitors	X	.287
Out-of-State Visitor Spending in WV Parks areas		$2,493,610
Out-of-State Parks System Visitors Spending in WV (outside of Parks System) ($2,493,610 x 2.2)	=	$5,485,942
Total Out-of-State Parks System Visitor Spending in WV		$7,979,552

For purposes of data comparability, the same 1.2 multiplier applied to the total direct benefits of nonresident students was also applied to the total benefits of Out-of-State Park areas visitors (Table 9) in order to estimate indirect benefits to the State economy.

TABLE 9

An estimate of total economic benefit (direct and indirect) associated with Out-of-State WV State Parks System Visitors in FY 1983-84.

Total Direct Economic Benefit	X	Multiplier	=	Total Economic Benefit
$7,979,552	X	1.2	=	$9,575,462

PART 2. ESTIMATION OF ECONOMIC COSTS

A. Nonresident Student

The economic costs to West Virginia associated with nonresident students were estimated by first determining the overall investment (cost) per student (resident and nonresident, all levels) (Table 10).

TABLE 10

An estimation of West Virginia's dollar investment per WVU student in 1983-84:

1983-84 Net State Appropriations	/	Total FTE Student Enrollment	=	State Investment Per FTE Student
$55,738,000	/	17,572		$3,172/FTE Student

For the academic year 1983-84, the direct cost per FTE student to the State of West Virginia was $3,172. In order to calculate the total cost to the State for WVU's nonresident students, the cost per FTE student ($3,172) was multiplied by the total 1983-84 WVU nonresident enrollment (7,431). This calculation totals $23,615,796 as the cost of WVU's nonresident enrollment (Table 11).

TABLE 11

A calculation of total economic costs to West Virginia associated with WVU's 1983-84 nonresident enrollment:

Cost/Student	X	Nonresident FTE Enrollment	X	Total Economic Costs
$3,172		7,431		$23,615,796

B. Out-of State WV State Parks System Visitors

The economic costs to the State attributable to Out-of-State WV State Parks System visitors was estimated by multiplying the State appropriations by the State Parks System by the Out-of-State visitor percentage (Table 12).

It should be noted that there are some additional marketing and promotional expenses associated with marketing the State Parks to out-of-state residents which are not included in this analysis. These costs are included in State travel development and/or communication budgets and are extremely difficult if not impossible to extract, thus making any estimates less than meaningful.

TABLE 12

Total economic costs to the State attributable to Out-of-State WV State Parks System Visitors - FY 1983-84:

State Appropriations[7]		$7,056,354
Out-of-State Percentage	X	.287
Economic Costs Attributable to Out-of-State Visitors		$2,025,173.50

[7]Due to the difficulty in determining an exact appropriations figure for the WV State Parks areas (line item combinations), the figure used in this study is calculated by subtracting published figures for total revenues from Grand Total Expenses. The validity of this calculated figure is based on the WV State legal requirement for balanced budgets within the State system.

PART 3. BENEFIT TO COST COMPARISON

A. Nonresident Students

To complete the analysis of economic impact associated with nonresident enrollment, an overall benefit-to-cost ratio was then calculated (Table 13).

TABLE 13

An estimate of economic benefit-cost ratio associated with WVU's 1983-84 nonresident enrollment:

Total Economic Benefit	/	Total Economic Costs	=	Benefit/Cost Ratio
$66,858,372		$23,615,796		2.83

A benefit-to-cost ratio of 2.83 represents the net economic impact on West Virginia's state and local economies associated with WVU's nonresident enrollment in 1983-84. This ratio suggests that for each one dollar invested by the State in WVU's nonresident students, the State realized a return on investment of $2.83 over the period of one academic year (10 months).

This table details the generic calculation of economic benefit wherein dollars "spent in the economy" are shown as a ratio against tax dollars spent in promoting the activity. We emphasize this point lest invalid comparisons be made.

*Exact figures are difficult to determine and vary from year to year because several bond issues are included.

B. Out-of-State WV State Parks Areas Visitors

A benefit-to-cost ratio was similarly estimated for Out-of-State WV State Parks System visitors (Table 14).

TABLE 14

An estimate of economic benefit-to-cost ratio associated with Out-of-State WV State Parks Visitors in FY 1983-84:

Total Economic Benefit	/	Total Economic Costs	=	Benefit/Cost Ratio
$9,575,462		$2,025,173		4.73

A benefit-to-cost ratio of 4.73 suggests a return of $4.73 for each $1.00 invested in the State Parks System for Out-of-State Visitors.

PART 4. STATE SUBSIDY COMPARISON

While there appears to be little question that the presence of non-resident students benefits the institution and the State socially and culturally, the costs associated with these benefits in terms of educational subsidies are often considered to be substantial--especially by the State tax-paying public. In light of the results of the cost-benefit analyses, the validity of this thinking was tested by calculating the estimated per student State educational subsidy--the difference between the State investment per FTE student and the student charges in terms of tuition and fees.

TABLE 15

An estimate of the per student State educational subsidy associated with WVU's 1983-84 nonresident and resident enrollment:

Residency 7 Level	FTE	Annual Tuition & Fee Charges	State Subsidy Per FTE Student
Undergraduate			
Resident	8,287	$1,090	$3,172-1,090=$2,082
Nonresident	6,418	2,940	3,172-2,940= 232
Graduate			
Resident	1,854	$1,150	$3,172-1,150=$2,022
Nonresident	1,014	3,140	3,172-3,140= 32

As can be seen in Table 14, the annual State educational subsidy per FTE student for nonresident students is relatively small at all levels--less than 8% of the average State investment per FTE student. During the study year, a nonresident student at WVU paid in tuition and fees an amount closely approximating the State cost for his/her educational experience. Therefore, one might legitmately consider the effect of the other expenditures and student living expenses--as virtually "cost-free." Including the 1.2 multiplier, this total "cost-free" infusion of dollars exceeds $40,000,000. This $40,000,000 may be loosely translated into the equivalent of over 2,500 jobs each paying $15,000 annually--not an insignificant economic factor.

Discussion

While the results of this study show a substantially higher benefit-to-cost ratio associated with Out-of-State WV State Parks visitors compared with that associated with nonresident students, this finding is hardly unexpected. Economic gain is, after all, the primary business of the State Park Tourism industry. What is significant, and perhaps counter to general thought, is that these data suggest a public institution of higher education yields significant net economic benefits to the State economy--in this

year. 60%, as good a return as the State Parks System, was a by-product of its primary mission.

However, because of peculiarities in the funding of certain capital bonds by West Virginia, approximately 50% of the tuition and fees paid by WVU's nonresident students are dedicated to the retirement of those capital bonds. Their "tuition" bonds, however, are backed by the "full faith and credit of the State" and, therefore, 50% of the tuition and fees of non-resident students ($11,026,440) is a direct offset against the State appropriation ($23,615,796) allocated to nonresident instruction. Removing $11,026,440 from each side of the equasion of Table 13 shows a much higher Benefits/Cost ratio in West Virginia because of its capital funding peculiarities that would be perhaps true in other states.

TABLE 13A

Revised Total Economic Benefit	Revised Total Economic Costs	Revised Benefit/Cost Ratio
$55,831,932	$11,807,898	$4.72

The concept of the economically burdensome nonresident student simply is not borne out by the results of this research. In fact, these data suggest a strong economic benefit to the State associated with nonresident enrollments. The analogy of the nonresident student and the tourist appears to remain intact. Certainly, a business or tourist group which could infuse over $60 million in "new" money annually into the State economy and offer a return on investment of nearly three to one should be highly recruited and carefully nurtured.

While one might wish for data more specific and precise than the available "estimates," the methodology and data used for this research were deliberately selected to be conservative in nature, thus, in all probabil-

ity, yield results which reflect a low-end estimate of the true economic impact.

The result of this study will be used to assess the relative investment value of various levels of state subsidies for nonresident students. Discussion will focus on the value of this type of State investment as a means of increasing nonresident enrollment for the institution and maximizing the economic return to the State in terms of economic activity.

The purpose of this current research was to compare this investment return to that of another relevant State agency (State Parks System) and to assess and discuss the potential economic impacts of increased investment in the nonresident student industry.

Therefore, in light of this research, state legislatures and boards of trustees would be well advised to consider the economic impacts of the nonresident student industry when considering institutional funding requests or when questions arise concerning such things as tuition increases, and/or enrollment percentages of nonresident students. The results of this study clearly suggest that nonresident students may well be, in fact, a positive factor in the State economy.

REFERENCES

1. Annual Financial Report, Fiscal Year 1983-84--West Virginia University. Report submitted from the Budget Office, West Virginia University, to the West Virginia Board of Regents, September, 1984.

2. Ashton, Arthur B. and Huff, Robert A. A Study of the Economic Impact of Spending by Students in Arizona. Arizona Board of Regents, Phoenix, 1982.

3. Caffrey, John and Isaacs, Herbert H. Estimating the Impact of a College or University on the Local Economy. American Council on Education, Washington, DC, 1971.

4. Financial Review-FY 1983-84. West Virginia Department of Natural Resources, Division of Parks and Recreation.

5. Gay, Diane and Weintraub, Floyd. The Economic Impact of Independent Higher Education in New York State. Commission on Independent Colleges and Universities of the State of New York, New York, 1978.

6. Greenswood, M.J. "The Geographic Mobility of College Graduates," Journal of Human Resources. Vol. 8, pp. 1506-514, 1973.

7. Lines, Patricia M. "Tuition Discrimination: Valid and Invalid Uses of Tuition Differentials," Journal of College and University Law. Vol. 9, No. 3, pp. 241-261, 1982-83.

8. Long, J.F. Migration of Persons Entering and Leaving College in the United States. Proceedings: American Sociological Association, Annual Conference, New York, August, 1986.

9. McHugh, Richard and Morgan, James N. "The Determinants of Interstate Student Migration: A Place-to-Place Analysis," Economics of Education Review. Vol. 3, No. 4, pp. 269-278, 1984.

10. Morgan, James N. "Tuition Policy and the Interstate Migration of College Students," Research in Higher Education. Vol. 19, No. 2, pp. 183-195, 1983.

11. Ontjes, Robert and Browning, Edward. The Impact of Non-Resident Students at Northwest Missouri State University. Office of Institutional Research, Northwest Missouri State University, Maryville, January, 1973.

12. Schwartz, A. "Migration, Age and Education," Journal of Political Economy. Vol. 81, pp. 1153-1169, 1976.

13. Smith, Edwin and Bissonnette, Kathleen. The Economic Impact of Non-Resident Students on the Host State. Paper presented at the 7th European Association for Institutional Research Forum, August 1985. Office of Institutional Analysis and Planning, West Virginia University.

14. Student Expense Budgets - 1983-84. Financial Aid Office, West Virginia University, May, 1983.

15. The Economic Importance of Higher Education in Vermont. Vermont State Commission on Higher Education, 1979.

16 West Virginia's State Parks System, 1979-1980, prepared by the Bureau of Business Research, West Virginia University for the Department of Natural Resources.

17. Yi, Peggy S. A Study of the Economic Impact of West Virginia University on the Local Community. Office of Institutional Research, West Virginia University, September, 1984.